

FY 2005 Massachusetts Community Development Block Grant Program

**National Objective
Area-Wide Benefit for
Low- and Moderate Income**

GUIDE

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NATIONAL OBJECTIVE DOCUMENTING AREA-WIDE BENEFIT FOR LOW- AND MODERATE-INCOME

One of the ways that communities can meet a national objective of the Community Development Block Grant (CDBG) Program is by showing that a project is available to benefit low- and moderate-income persons on an “area basis.” Section 102(a)(20) of the Housing and Community Development Act of 1974 defines the term ‘low- and moderate income persons’ as families and individuals whose incomes are no more than 80 percent of the median income of the area involved. A project generates an area-wide impact, such that the benefits are shared by everyone who lives there regardless of income. To meet the national objective in this manner, activities must meet *both* of these criteria:

- The benefits of the project extend throughout a designated area where at least 51% or more of the residents are low- and moderate-income persons. The area is called the *service area* or *target area*. The 51% or more low- and moderate-income persons requirement is the *beneficiary threshold*.
- and**
- The service area is predominantly residential.

Here are some examples of the types of activities that could benefit low- and moderate-income persons on an area-wide basis:

- Repairs and improvements to streets and sidewalks in a residential neighborhood or a mixed-use area that is predominantly residential
- Installation of new, or upgrades to existing, water and sewer mains
- Park and playground improvements
- Neighborhood facilities, such as community centers
- Assistance to small businesses
- Libraries, police substations, fire stations, fire protection equipment
- Certain types of social services

To determine whether these activities could benefit low- and moderate-income persons throughout an area, *communities must first establish the geographic boundaries of the entire area served by a project and then determine whether (a) 51% or more of the residents who benefit are low- and moderate-income persons, and (b) the predominant land uses in the area are residential.*

1. Defining a service area

The first step in the national objective analysis involves determining where people who stand to benefit from a project actually live. The benefits of some activities easily lend themselves to geographic delineation. For example:

- Community policing, when confined to a given response area that can be clearly identified on a map.
- Improvements to a street that primarily serves the people residing in the houses on either side of it.
- Upgrading old water lines when the resulting improvements in domestic pressure and fire flows can be shown to principally benefit a confined residential area.

The benefits of other kinds of projects are much more difficult to geographically delineate. For example:

- Upgrading sections of water mains that are integral to the public water distribution system as a whole.
- Improvements to parks and playground facilities that serve both an immediate neighborhood and community-wide needs, such as baseball or soccer fields and tennis courts or the town's only toddler playground.
- Neighborhood facilities like a youth center, which may serve teenagers throughout town; or a town-owned community center that offers programs for people in the surrounding neighborhood but also doubles as extra public meeting space for town boards and committees because of limited room at town hall.
- Improvements to a street that serves residents as well as "through" traffic such as a collector road, the town's Main Street, or another major route where there are land uses which generate out-of-area trips (e.g., the street where the town's only high school is located).¹

The point here is that for any given project, which may be eligible for CDBG assistance, you must establish (a) who benefits and (b) where they live. This information will determine the area within which more than 51% of the residents must be low- and moderate-income persons. Unless the community's overall population is more than 51% low- and moderate-income,² many projects that are CDBG-eligible cannot be funded because their geographic service areas do not have enough low- and moderate-income residents to meet the beneficiary threshold for area-wide benefit. The applicant community must clearly explain the methodology for establishing geographical

¹All streets support some degree of non-resident traffic use. Making a case for area-wide benefit means that the non-resident use of a through street obtains only a "deminimus" benefit, or a benefit that is so minor in relation to the benefit to residents as to be immeasurable. Through streets can be funded if they meet a deminimus benefit standard.

²According to HUD's analysis of 2000 U.S. Census data, the only non-entitlement communities in Massachusetts that meet this requirement are Adams, Athol, Chelsea, Everett, Gosnold, Monroe, Montague, North Adams, Plainfield, Provincetown, Revere, Southbridge, Wareham, Warren and Webster.

boundaries of the service area and the percentage of low- and moderate-income persons. The burden is on the applicant community to show how it delineated a project's service area.

Applicants must also furnish a parcel map of the target service area, showing:

- If applicable, the Census Block Groups;
- if applicable, surveyed streets and surrounding area;
- the dominant land uses; and
- if applicable, current and proposed sewer or water lines, direction of flow, storage tanks, pump stations, treatment plants and well fields.

If the residential target area contains vacant land:

- Show each vacant parcel of land on a parcel map; and
- describe the potential future use of the land for the next five to seven years. Consideration should include current zoning, subdivision plans, planning documents, etc.; and
- describe how future use could have an impact upon the national objective.

Attachment 1 of this document is a chart with *examples* of the types of back-up documentation communities can consider to defend the boundaries of a service area. It is not all-inclusive, but provides “common-sense” guidance.

2. Documenting >51% low- and moderate-income beneficiaries

Once a project's service area has been determined, establish the income characteristics of the people who live there. If fewer than 51% of the service area residents are low- and moderate-income, the project will not meet the national objective. To prove that 51% or more of the residents are low- and moderate-income persons, communities may use one of the following:

- HUD has calculated the number of low- and moderate-income residents living in each community at both town-wide and Census block group levels. This data are available at <http://www.hud.gov/offices/cpd/systems/census/lowmod>. If the service area for a project is coterminous with a block group or a set of block groups, you may use HUD's statistics to prove that the national objective is met. Geographic boundaries for block groups and census tracts can be found at: <http://www.census.gov/main/www/cen2000.html>. Go to American Fact Finder – Maps and geography.
- An income survey of a representative number of service area households. The survey results are then used to statistically infer the total population (in persons) and then, the total number and percent of low- and moderate-income

persons. DHCD survey requirements and HUD survey methodology is discussed below.

- If a survey is used to substantiate a low- and moderate-income (LMI) area, the survey and summary survey results must be included as documentation. **The summary must also include the survey data broken down by street (total number of households on each street and the income distribution for LMI households and all other households for each street).** A valid survey is no older than three years. If between three and five years old, DHCD will consider the survey if the applicant demonstrates that the surveyed households are the same as when originally surveyed, and that no additional residences have been added to cause the survey to become statistically unreliable. Applicants should seek DHCD's advice in advance prior to using older surveys. **Note:** surveys must be worded to not bias the results. For example, it is not appropriate to say, "In order for the municipality to receive desired funding, a survey must be conducted to show that most of the residents of the area have low- and moderate-income."

Three types of errors are common among communities trying to make a case for area-wide benefit:

- Assuming that a project meets the national objective because it happens to be located in an area where HUD statistics show 51% or more of the residents are low- and moderate-income persons, but the Census block group boundaries and the service area are not the same.
- Using technically deficient survey methods such as an inadequate sample size, poor sampling techniques, or survey instruments that fail to capture enough information to show how many individual people will benefit from a project.
- The service is available to a population that extends beyond the delineated service area.

Methodology for locally administered population and income surveys

HUD provides a standardized survey methodology that applicants can use as a "safe-harbor" approach: if it is followed *completely* and the results show that 51% or more of the service area residents are low- and moderate-income persons, a community's statistics will be accepted as meeting the *beneficiary threshold* for an area-wide benefit activity. The HUD methodology is reproduced in full in Appendix C of the 2005 Mass. CDBG Application Package. In Attachment 2 of this document, we provide a reformatted version of what is known as the HUD Low- and moderate-income Worksheet. If you plan to base an area-wide benefit activity on a local survey conducted according to HUD's protocol, you must include the HUD Low- and moderate-income Worksheet in your application. *A completed Worksheet is **not** included in the page limit on the Project Packet.*

CDBG regulations allow states that administer this program to accept survey data derived from methods other than HUD's. *DHCD recommends that communities use the HUD survey protocol.* When designing alternatives, the following issues should be considered:

- Establishing that 51% or more of the service area residents are low- and moderate-income persons means you must be able to quantify the total number of residents in the area. "Residents" means individual persons, not households. *A low- and moderate-income person is an individual who is part of a low- and moderate-income household.*
- Establish and follow procedures to *randomize* your sample selection. The HUD methodology relies on a random numbers table to structure how you choose the housing units you survey. Because a random numbers table is the easiest way to do this and is consistent with standard population survey protocol, Mass. CDBG recommends that it be used in the method as well. If the universe is larger than 100 households and it is difficult to adapt the HUD-supplied random numbers table for your survey, Mass. CDBG can provide you with another table upon request.
- Statistically sound survey methods require a reliability test that can be used to infer an "error" rate. There are fairly simple ways to do this; HUD's protocol includes one. An adapted version is shown as Attachment 3 of this document.

The HUD survey procedure requires communities to *randomly sample* a sufficient number of households to interpolate the average size (in persons) of both over-income and low- and moderate-income households in the service area. These average household sizes are then used to mathematically estimate the total number and relative percentages of over-income and low- and moderate-income persons.

As a rule, the smaller the "universe" of households, meaning all households in the service area, the larger the relative sample size required. Thus, for very small service areas -- those with 55 or fewer households -- you must obtain income information from 95% of the households. Large service areas, or those with 2,700 or more households, require responses from at least 15%. These response standards are based on statistical assumptions about the reliability of the *household size* factors you must eventually infer; they are central to any later claim that more than 51% of the residents are low- and moderate-income people.

If through other means you can establish how many individual persons live in the service area, you do not necessarily have to survey as many households as HUD requires in its protocol. For example, a community that maintains annual census records *may* be able to obtain information from the Town Clerk to determine that the 50 households in a service

area represent a total of 130 people.³ To do this, you must verify that the Town Clerk's census records include all residents of the households (e.g., children as well as adults), and you need to inquire about the annual census response rate. Assuming the records include all residents and the response rate is acceptable, you would need to obtain income information from enough households to show that at least 66 people -- or 51% -- are low- and moderate-income.⁴

However, you will probably have to account for more than 66 people. Bearing in mind that the HUD methodology assumes (predicts) an error rate of +/- 5%, using local census records for a population baseline will likely increase the rate of error. This is because you are mixing sources of data -- a local *population* census and a *population and income* survey, taken at different times using different procedures -- to arrive at conclusions about the income levels of persons living in an area.

If the Town Clerk's census response rate is poor, it may make more sense to use the HUD survey methodology to document present-day characteristics of a neighborhood. However, if the response rate is consistent with statistical expectations for the method usually used to gather local census data (by mail: 25-50%), you could determine the service area's total population from the local census and effectively eliminate some of the steps required by the HUD protocol.⁵ Attachment 4 of this document is a worksheet Mass. CDBG has developed for the alternative described above, the Local Census-Based Low- and moderate-income Worksheet, which captures and reports low- and moderate-income person statistics using a service area population baseline from local sources.

Regardless of whether you follow HUD's process or develop an approved, alternate method, these general caveats apply:

- Establish the universe of households that in the service area. "Universe" means the total number of households that stand to benefit from the project. The method that is designed must account for how total households will be translated into total population.

³Be sure to check with the town clerk to ensure that the information source is the population census and not merely a street listing. In many communities, street listings report only adult household members by address. The original census documents usually include all household members, including minor children.

⁴Since the HUD method requires very large sample sizes for small target areas but considerably smaller sample sizes for large target areas, it is the preferred method for trying to establish the number of low- and moderate-income persons at a town-wide scale or for densely populated areas of smaller cities. Relying on a local census for a baseline of persons in a target area means that, to prove more than 51% are low- and moderate-income, you must sample enough households to reach more than half the population, in persons. For this reason, it can work well in small target areas: where the HUD method requires you to obtain responses from 95% of all households in a 55-household target area, you may only need to survey 30-40 of them to obtain enough income data to show that over half the residents in the same-size target area are low- and moderate-income. At about the 300-household target area size, the efficiencies of the "local census" method begin to decline, since you would have to interview about the same number of households required by the HUD method. For a target area of 2,700 households, it is clearly simpler to sample 15% of the households (400) than the 1,200-1,400 you would need to reach half of the resident population, in persons.

⁵If during your own survey you found many discrepancies between actual household resident counts and the information you originally obtained from the town clerk, you would have to abandon this approach and either follow HUD's method, or design an alternative acceptable to DHCD. "Many discrepancies" means an error rate of greater than 5%.

- Do not assume that elderly, severely disabled adults and certain other population categories are low- and moderate-income persons when documenting national objective compliance for an area-wide benefit activity.⁶
- Include all service area housing units in your sample size calculation, including units, which are vacant. This is to ensure baseline consistency.

Further, if using the HUD survey protocol and only marginal compliance is reached with the beneficiary threshold of 51% low- and moderate-income persons, analyze the sample using Attachment 3 to test whether the sample is representative of the total universe that is being studying. This is ordinarily unnecessary when a survey shows a very high number of low- and moderate-income persons in the service area, say, 65-70%. However, a survey that suggests 51-54% of the residents are income-eligible could be based on a respondent pool, which is unrepresentative of the universe of households. *In such an instance test the sample distribution using the table in Attachment 3.*

It is possible that a sample is representative of the target area even if there is a size difference in between income-eligible and over-income households. The point here is that a significant size difference may signal a sampling error. If you find a significant difference and the percentage of low- and moderate-income persons is between 51-54%, some additional households should be surveyed (increase your sample size) to see if the household size variations in the original calculations remain more or less constant. This will help determine if the variation is target area-specific or due to a sampling problem.

How Mass. CDBG evaluates area-wide benefit

For area-wide benefit activities, a community will generally meet the review threshold for national objective compliance if it:

- provides and documents a rational explanation of its method and assumptions for defining the service area for a project; and
- documents that 51% or more of the service area residents are low- and moderate-income persons (lmi and non-lmi by street for infrastructure projects should be provided), using HUD statistics or an acceptable survey procedure; and
- documents that the service area is predominantly residential and demonstrates that if the service area includes vacant land that future use will cumulatively benefit 51% or more of the service area residents.

⁶HUD accepts these presumptions unless there is evidence to the contrary. Please refer to Appendix D of the Mass. CDBG Application, for information on all non-entitlement communities and the percentage of low and moderate elderly residents. If a municipality has fewer than 51% of its residents as low- or moderate-income, DHCD will not accept the elderly presumption of low- and moderate-income. A statistically reliable survey must be presented to demonstrate that the [potential] users are low- or moderate-income. For senior center, grantees will be required to demonstrate that the users are predominantly low- and moderate-income for a five year period.

This means the project will be reviewed and scored by a team of application readers because *for application purposes* it will be deemed to meet minimum national objective standards unless there is other evidence to the contrary.

The second point above, documenting that 51% or more the beneficiaries are low- and moderate-income, means that you must do at least one of the following *in the application*:

- when using HUD statistics, cite the census tract and block group(s) and the corresponding HUD numbers and percents of low- and moderate-income persons. If combining more than one tract or block group to delineate a service area, cite all of the tracts and/or block groups, and list (a) the universe numbers for each, (b) the low and moderate person numbers for each, and (c) calculate the percentage of low- and moderate-income persons for the proposed service area. *Do not assume* that combining two block groups, one with 55% low- and moderate-income persons and the other, 49%, means the service area is 52% low- and moderate-income ($55 + 49/2 = 52$). You must independently calculate a low- and moderate-income persons number by working with the “new” universe of persons living in the service area.
- when using survey data, describe the survey methodology and *attach the low- and moderate-income worksheet(s) that best fits the method used*. This will be sufficient evidence, for application purposes, that a service area survey was conducted. Be sure to explain in the narrative whether a door-to-door, telephone or mail-response survey was conducted; when the survey was conducted and by whom; and how it was determined that the respondent pool was representative of all households in the service area.

Further, the target area map must clearly delineate the service area. If HUD statistics are used to calculate the percent of low- and moderate-income residents, the map must show the relationship between the boundaries of the tracts or block groups and the boundaries of the service area. Communities using local survey information can delineate their service area on a base map such as a zoning or assessor’s map. In either case, the maps must be clear enough to show (a) that the area is primarily residential, and (b) the relationship between the proposed project site and the geographic limits of the service area.

How Mass. CDBG monitors area-wide benefit activities for actual compliance

Grant recipients are required to maintain documentation that shows how each CDBG-assisted project meets a national objective. If a community receives a grant that includes an area-wide benefit activity, it is important to understand that the claims made in the application will be reviewed during the compliance monitoring that Mass. CDBG is required to do by law. For example:

- A water line for a low-income neighborhood may be reviewed for engineering data that show the geographic extent (in distribution system terms) of pressure and fire flow improvements resulting from the project. If the benefits of the project actually extend beyond the area mapped in the application, it may be required to collect additional household income information to show that 51% or more of the residents in the revised service area are low- and moderate-income persons.
- Street improvements in a low-income neighborhood may involve a site visit by the person monitoring the grant. The purpose would be to see if the area is predominantly residential, and if traffic is principally generated within the service area.
- An area in which sewer service was extended may be reviewed for the amount of vacant and underdeveloped land it contains. If the area was low- and moderate-income at the time the application was funded but the installation of sewer service triggered new growth, the community may be asked to show whether it was aware of pending land use changes at the time it applied or at the point that it was ready to proceed with the project. Evidence that planned vacant land conversions were known to the community when it proceeded with a CDBG-assisted project *could* result in a disallowance of costs if the resulting new growth changed the income characteristics of the service area to less than 51% low- and moderate-income persons.
- In all cases, Mass. CDBG's monitoring requires verification that the procedures used to document household (and hence, individual person) incomes were adequate to meet the national objective beneficiary threshold. If a survey method was used to estimate the number of low- and moderate-income persons in the target area, all of the completed surveys must be kept; a list of the universe of households and the ones actually sampled, including the original random selection list and any replacement households that had to be chosen during the survey process; and all data calculations. Mass. CDBG will need to look not only at the survey questionnaires for quantity, but the household selection procedures to review their adequacy. All documentation of the statistical methods, including random sampling procedures, and resulting calculations must be available when the project is monitored.

In short, do not assume that Mass. CDBG's decision to fund an area-wide benefit project means that the national objective information in the application is sufficient for compliance monitoring purposes. Before CDBG funds are obligated to *any* project, consult with the program staff assigned to the community to clarify the documentation standards that must be met to prove the national objective can be met.

Attachment 1:
Sample documentation procedures for establishing the geography of a service area

Activity	Acceptable documentation	
	Required at time of application	May be required at time of compliance monitoring: for guidance only.
Upgrades to or installation of new water, sewer lines in a confined, geographic area	<p>Target area map is required; with service area of existing or proposed infrastructure delineated and direction of flows. Map also should highlight area impacted by the project, prevailing land uses coded and area surveyed for national objective compliance.</p> <p>In national objective narrative, applicant needs to state how area was defined and what corroborating evidence it has that can later be verified by Mass. CDBG</p>	<p>Technical evidence referenced in application must be available for review. May include: engineering data or technical memorandum from project engineer or water superintendent documenting geographic impact of project; corresponding map. If insufficient, e.g., vague or inconsistent with approved target area map, community may be asked to provide additional documentation.</p>
Upgrades to or installation of water, sewer lines as part of a larger capital project, where only a portion is CDBG-assisted	<p>Project map showing entire area where improvements will occur, with CDBG portion clearly delineated (service area) with service area of existing or proposed infrastructure delineated and direction of flows. Map also should highlight area impacted by the project, prevailing land uses coded and area surveyed for national objective compliance.</p> <p>Narrative must explain how service area was defined; why CDBG portion is essentially “stand-alone” in relation to the rest of the project; identify back-up documentation to support community’s claims. Summary-level documentation should be included in an application appendix, especially, a cost allocation plan.</p>	<p>Complete technical documentation and cost allocation plan must be available for review. For example: engineering data showing that the CDBG-assisted portion benefits a discrete area, such as a sewer line serving one residential neighborhood while other, non-CDBG resources are paying for main interceptor connecting other neighborhoods to a larger collection system; cost allocation plan showing the proportion of CDBG funds expended in relation to other sources.</p> <p>Target area may be visited for corroboration of residential make-up and any evidence of new growth that may have been triggered by or occurred in tandem with the project.</p>
Repairs to streets, sidewalks	<p>Target area map required. Zoning or assessors base maps showing portion of town in which streets are located, with service area delineated and prevailing land uses coded.</p> <p>Narrative must identify available back-up documentation and explain how area was delineated. Including actual support documentation in</p>	<p>Monitoring will involve examining back-up documentation and may include field inspection of improvements to verify service area. Examples of suitable documentation: a recent traffic study; or a memorandum to file from the police, highway or planning departments. Such memoranda should clearly explain how the service area was defined. Service area must be delineated on a map and correspond to technical documentation.</p>

Attachment 1:**Sample documentation procedures for establishing the geography of a service area**

Activity	Acceptable documentation	
	Required at time of application	May be required at time of compliance monitoring: for guidance only.
	appendix is optional.	
Parks and playgrounds	<p>Target area map required.</p> <p>Narrative must explain how area was established; types of back-up documentation available for review. Inclusion of other evidence in an appendix is optional; may be necessary if any question as to extent of service area/users of the facility.</p> <p>Note 1: playing fields are suspect because they usually serve community-wide use, e.g., Little League teams. Without strong proof to the contrary, they will normally be assumed to fail an area-wide benefit test.</p> <p>Note 2: a tot lot or neighborhood recreational area with no on- or off-street parking facilities, located within a low-income service will normally meet the national objective threshold test unless there is evidence to the contrary.</p>	<p>Documentation of service area will be reviewed. Facility may be visited to determine whether written documentation appears supportable in the field. Examples of acceptable back-up documentation: target area map and recent open space/ recreation plan identifying # of recreational facilities in the community, predominant users of each; memo to file from parks commission; records of field use; survey of park users on different dates/times.</p>
Neighborhood facilities	<p>Target area map required.</p> <p>Narrative must explain how service area was determined and the extent and types of corroborating evidence available for review. Inclusion of back-up material is optional in an appendix.</p>	<p>Back-up documentation will be reviewed for adequacy and consistency with statements made in original application. Monitoring may also entail visit to service area, interviews with recreation personnel, interviews with residents of the area; etc.</p> <p>Target area map and survey of facility users that identifies place of residence; memorandum from director of facility describing services and the geographic area(s) from which participants are drawn; complete list of all programs and services provided in the building and # participants in each over time.</p>
Social services such as community policing, comprehensive neighborhood stabilization program	<p>Target area map required.</p> <p>Narrative must explain how service area was determined; how community will monitor</p>	<p>Back-up documentation will be reviewed for adequacy and consistency with statements made in original application. Monitoring may also entail visit to service area, interviews with service</p>

Attachment 1:**Sample documentation procedures for establishing the geography of a service area**

Activity	Acceptable documentation	
	Required at time of application	May be required at time of compliance monitoring: for guidance only.
	activity to ensure the service area is maintained in actual practice. Monitoring must include occasional on-site review of programs to verify service delivery patterns.	providers, interviews with residents of the area ; community policing logs , etc. Examples of acceptable back-up documentation: target area map and documentation from police department showing response area for program; memoranda from service providers explaining where and how services are provided; subgrantee agreements clearly limiting eligible area for CDBG-assisted programs.

Attachment 2: HUD Low- and moderate-income Survey Worksheet⁷

Part A: Information Contained in Survey		
Step	Item	Answer
1	Enter the estimated total number of households in the target area	
2	Enter the total number of households interviewed	
3	Enter the total number of low- and moderate-income households interviewed	
4	Enter the total number of persons living in the low- and moderate-income households interviewed	
5	Enter the total number of households interviewed in which the income level was above the low- and moderate-income level	
6	Enter the total number of persons living in the households in which the income was above the low- and moderate-income level	
Part B: Calculations based on data contained in the survey		
7	Divide line 4 by line 3. This is the average size of the low-moderate income household interviewed.	
8	Divide line 6 by line 5. This is the average size of the non-low-moderate income household interviewed.	
9	Divide line 3 by line 2. This is the proportion of households interviewed that have low- and moderate-incomes.	
10	Divide line 5 by line 2. This is the proportion of households interviewed that do not have low- and moderate-incomes.	
11	Multiply line 1 by line 9. This is the estimate of the total number of low- and moderate-income households in the target area.	
12	Multiply line 1 by line 10. This is the estimate of the total number of non-low-moderate income households in the target area.	
13	Multiply line 7 by line 11. This is the estimate of the total number of low- and moderate-income persons in the target area.	
14	Multiply line 8 by line 12. This is the estimate of the total number of non-low-moderate income persons in the target area.	
15	Add lines 13 and 14. This is the estimate of the total number of persons in the target area.	
16	Divide line 13 by line 15, and multiply the resulting decimal by 100. This is the estimated percentage of persons in the target area who have low- and moderate-incomes. ⁸	

⁷For further guidance, consult "Survey Methodology to Determine Low/Mod Status of CDBG Service Areas," HUD Memorandum dated 11 July 1989, reprinted in full as Appendix C of the Mass. CDBG Application Package. Sample sizes and response rates must be consistent with HUD specifications service area surveys and will vary based on size of universe and survey distribution procedures.

⁸If percentage is between 50.5-54%, you must complete Attachment 4, Distribution Analysis Worksheet, and include in application.

Attachment 3: Distribution Analysis Worksheet: Household Size by Household Income

Number of Persons in Household	Households with low- and moderate-incomes		Households with above-low- and moderate-incomes	
	Number	Percent	Number	Percent
1				
2				
3				
4				
5				
6				
7				
8				
9+				
Totals		100%		100%

Instructions:

- Count the total number of one-person low- and moderate-income households surveyed, and enter the number in the appropriate column above. Repeat this procedure for the number of one-person, over-income households surveyed, and so forth, until the all columns headed with “number” are complete.
- For each income group, divide the number of one-person, low-income households by the total number of low-income households, and then multiply the result by 100 to calculate the percentage of low-income households that consist of one person. Repeat this procedure for one-person, over-income households, and so forth, until the columns headed with “percent” are complete. Each percent column should add up to 100, allowing for rounding errors.
- Compare the percentages of low- and moderate-income respondents with the percentages of over-income respondents for each household size. If in the low- and moderate-income group you have (for example), 20% with one person, 30% with two people, 40% with three people, and 10% with four people; and in the over-income group you have 18% with one person, 32% with two people, 38% with three people and 12% with four people, you should assume that your estimate of low- and moderate-income persons in the service area is statistically valid.
- If the distributions of family size by income group are significantly different, e.g., 20% of your low-income households have one person while 40% of your over-income households have one person, then *your sample distribution is statistically invalid*.

Attachment 4: Local Census-Based Low- and moderate-income Worksheet

Part A. Information Contained in Survey		
Step	Item	Answer
1	Enter the estimated total number of households in the target area.	
2	Enter target area response rate achieved by most recent local census, in %. ⁹	
3	Enter the total number of persons living in all target area households based on the most recent annual census. Identify source (e.g., Town Clerk) and census year:	
4	Enter the total number of households interviewed. ¹⁰	
5	Enter number of households in which the actual number of persons residing in them differs from the household size information obtained from local census records. Include vacant units.	
6	Subtract line 5 from line 1.	
7	Divide line 6 by line 1. This is the estimated error rate in the target area population calculated from local census records. ¹¹	
Part B: Calculations based on data contained in the survey		
8	Enter the total number of persons living in the low- and moderate-income households.	
9	Enter the total number of persons living in the households in which the income was above the low- and moderate-income level.	
10	Enter the number of persons in households that you did not survey (using local census records).	
11	Add line 9 and line 10 and enter the sum.	
12	Divide line 8 by line 3, and multiply the resulting decimal by 100. This is the estimated percentage of low- and moderate-income persons in the target area.	

⁹If the response rate was <40% and the survey was taken by mail, you should not use local census information to estimate the total number of persons in the target area. Instead, use HUD survey methodology.

¹⁰To validate claim that 51% or more of target area persons are low- and moderate-income, survey enough households to document that more than half of the persons living in the area are low- and moderate-income. For this reason, the local census method is practical for small target areas, e.g., with 300 households or less. It is recommend that a local census-based survey achieve a low- and moderate-income result of greater than 51% in order to overcome a rate-of-error problem.

¹¹If the error rate is 5% or more, you should not use local census information to estimate the universe of persons in the target area. Instead, use HUD survey methodology.